19. (Amended) A method of manufacturing a semiconductor device comprising the steps of:

depositing a semiconductor film comprising amorphous silicon on an insulating surface;

disposing a solution [catalyst metal] in contact with said semiconductor film, said solution containing a catalyst metal being capable of promoting crystallization of said amorphous silicon;

heating said semiconductor film and said catalyst metal to crystallize said semiconductor film; and then

annealing said semiconductor film by utilizing a light from a lamp to improve the crystallinity thereof,

wherein said annealing is carried out in such a manner that a temperature of a monitored single crystal silicon wafer is raised at a rate of 50 to 200°C/s and then cooled at a rate of 20 to 100°C/s.

24. (Amended) A method of manufacturing a semiconductor device comprising the steps of:

depositing a semiconductor film comprising amorphous silicon on an insulating surface;

disposing a solution [a catalyst metal] in contact with only a selected portion of said semiconductor film, said solution containing a catalyst metal being capable of promoting crystallization of said amorphous silicon;

heating said semiconductor film and said catalyst metal to crystallize said semiconductor film wherein crystals grow through said

semiconductor film in a horizontal direction with respect to said insulating surface in a region adjacent to said selected portion; and then

annealing said semiconductor film by utilizing a light from a lamp to improve the crystallinity thereof,

wherein said annealing is carried out in such a manner that a temperature of a monitored single crystal silicon wafer is raised at a rate of 50 to 200°C/s and then cooled at a rate of 20 to 100°C/s.

29. (Amended) A method of manufacturing a semiconductor device comprising the steps of:

depositing a semiconductor film comprising amorphous silicon on an insulating surface;

disposing a catalyst metal in contact with said semiconductor film, said catalyst metal being capable of promoting crystallization of said amorphous silicon;

heating said semiconductor film and said catalyst metal to crystallize said semiconductor film,

wherein the step of heating is carried out so that the crystallized semiconductor film [has a non] <u>does not have a</u> (111) plane orientation.

Please add new claims 34-47 as follows:

--34. A method according to claim 33 wherein said silicon nitride film is disposed under said semiconductor film.

35. A method according to claim 33 wherein said silicon nitride film is disposed on said semiconductor film.

36. A method of manufacturing a semiconductor device comprising the steps of:

depositing a semiconductor film comprising amorphous silicon on an insulating surface;

disposing a catalyst metal in contact with said semiconductor film;

heating said semiconductor film and said catalyst metal to crystallize said semiconductor film wherein crystals grow through said semiconductor film in a horizontal direction with respect to said insulating surface in a region adjacent to said selected portion; and then

annealing said semiconductor film by utilizing a light from a lamp to improve the crystallinity thereof;

wherein said annealing is carried out in such a manner that a temperature of a monitored single crystal silicon wafer is raised at a rate of 50 to 200°C/s and cooled at a rate of 20 to 100°C/s and the step of heating is carried out so that the crystallized semiconductor film does not have a (111) plane orientation.

37. A method according to claim 36 wherein said lamp is a halogen lamp.

38. A method according to claim 36 wherein said light is an infrared light.

39. A method according to claim 36 wherein said light has wavelengths from 0.6 μm to 4 μm.

40. A method according to claim 19 wherein said semiconductor film is deposited to a thickness of 100 to 1500Å.

41. A method according to claim 24 wherein said semiconductor film is deposited to a thickness of 100 to 1500Å.

42. A method according to claim 29 wherein said semiconductor film is deposited to a thickness of 100 to 1500Å.

43. A method according to claim 36 wherein said semiconductor film is deposited to a thickness of 100 to 1500Å.

44. A method according to claim 19 further comprising a step of patterning the crystallized semiconductor film to form an active region of a thin film transistor.

45. A method according to claim 24 further comprising a step of patterning the crystallized semiconductor film to form an active region of a thin film transistor.